

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A sound reproduction system comprising a digital audio signal input -(1), a digital audio signal processor (2, DSP) and a digital audio signal output -(1) wherein the digital signal processor (2, DSP) comprises a high high-pass (HP) filter (21) with having a pass frequency (f) of between a first and a second frequency, a compressing amplifier (22) for compression and amplification of a signal, at least said amplification being performed after HP filtering, and a clipper for clipping the HP filtered, compressed and amplified signal above a clipping level, wherein the sound reproduction system further comprises a measuring device for measuring background noise, and an adaptor for adapting one or more parameters (f, order) of the high-pass filter in dependence on the measured background noise.

2. (Currently Amended) A-The sound reproduction system as claimed in claim 1, wherein the pass frequency (f) is a frequency between 300 Hz and 2 kHz.

3. (Currently Amended) A-The sound reproduction system as claimed in claim 1, wherein the high high-pass filter is a first order or second order filter.

4. (Cancelled).

5. (Currently Amended) A The sound reproduction system as claimed in claim 41, wherein the pass frequency is adaptable between 50 and 2 kHz.

6. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the compressing amplifier is arranged not to amplify a signal having a signal strength below a threshold value.

7. (Currently Amended) A sound reproduction system comprising a digital audio signal input, a digital audio signal processor and a digital audio signal output, wherein the digital signal processor comprises a high-pass (HP) filter having a pass frequency (f) between a first and a second frequency, a compressing amplifier for compression and amplification of a signal, at least said amplification being performed after HP filtering, and a clipper for clipping the HP filtered, compressed and amplified signal above a clipping level as claimed in claim 1, wherein the device sound reproduction system further comprises a measuring device 130 for measuring background noise, and an adaptor 131 for adapting one or more parameters for of the compressing amplifier +22+in dependence on the measured background noise.

8. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the digital audio processor further

comprises a low-low-pass filter (23) for filtering the signal provided by the compressing amplifier and for providing an output signal, the pass frequency of the low-low-pass filter ( $f'$ ) lying in the range  $2 \text{ kHz}-F_s/2$ , where  $F_s$  is the a sampling frequency.

9. (Currently Amended) A sound reproduction system comprising a digital audio signal input, a digital audio signal processor and a digital audio signal output, wherein the digital signal processor comprises a high-pass (HP) filter having a pass frequency (f) between a first and a second frequency, a compressing amplifier for compression and amplification of a signal, at least said amplification being performed after HP filtering, and a clipper for clipping the HP filtered, compressed and amplified signal above a clipping level as claimed in claim 8, wherein the device sound reproduction system further comprises a measuring device 130 for measuring background noise, and an adaptor 131 for adapting one or more parameters (f") for of the low-low-pass filter in dependence on the measured background noise.

10. (Currently Amended) A The sound reproduction system as claimed in claim 9, wherein the sound reproduction system further comprises a means for activation and/or setting of the frequency dependence of the low-low-pass filter in dependence on the amplification in the compressing amplifier.

11. (Currently Amended) A The sound reproduction system as claimed in any one of the claims 41, 7 or 9, wherein the one or more of the said parameters is a non-linear function of the measured noise level.

12. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the sound reproduction system comprises the high-high-pass filter being followed by an AGC followed by a limiter/clipper.

13. (Currently Amended) A The sound reproduction system as claimed in claim 1, wherein the sound reproduction system further comprises an automatic volume leveler preceded, or preferably, followed by the high-high-pass filter, providing a leveled signal, followed by a gain and a clipper.

14. (Currently Amended) A method for processing digital sound signals in which method comprising the steps of:

attenuating frequency component components of the a sound signal lower than a cut-off frequency (f) between a first and a second frequency are attenuated;

amplifying and compressing the sound signals are amplified and compressed signal to within a signal band width; and

clipped clipping the sound signal above a clipping level within the signal band width,

wherein said method further comprises the steps of:

measuring a background noise level; and  
determining the cut-off frequency (f) in dependence on the  
measured background noise level (S).

15. (Currently Amended) A-The method as claimed in claim 1314,  
wherein the cut-off frequency is between 300 Hz and 2 kHz.

16. (Cancelled).

17. (Currently Amended) A-The method as claimed in claim 1614,  
wherein the cut-off frequency is determined by a non-linear  
function of the noise level (S).

18. (Currently Amended) A-The method as claimed in claim 1614,  
wherein the cut-off frequency ranges between 50 Hz and 2 kHz.

19. (Currently Amended) A-The method as claimed in claim 1314,  
wherein said method further comprises, after compression-said  
amplifying and compressing step and said clipping step, attenuating  
frequency components of the resulting digital signal below a cut  
cut-off frequency f' between 2 and 4 kHz-are attenuated.

20. (Currently Amended) A-The method as claimed in claim 19,  
wherein the method further comprises the step of:

~~a noise level is measured and determining the cut-off frequency (f") is determined in dependence on the measured background noise level (S).~~

21. (Currently Amended) ~~A~~ The method as claimed in claim 20, wherein the cut-off frequency (f") is determined by a non-linear function of the noise level (S).

22. (Cancelled).

23. (Currently Amended) Computer ~~A computer-readable medium having stored thereon a computer program comprising program code means for performing a method as claimed in any one of claims 13 14, 15 and 17 to 22-21 when said program is run on a computer.~~

24. (Cancelled).